WESTON® MANAGERS DESIGNERS/CONSULTANTS
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PFE ORIGINAL (RED)

SITE ASSESSMENT TECHNICAL ASSISTANCE

EPA CONTRACT 68-S5-3002

PFE

21 July 1998

Mr. Peter Gold (3HS33)
Site Assessment Manager
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

TDD No. 9801-158
DCN D0000471

Subject: Robert Wooler Company Site Trip Report
CERCLIS No. PAD987279387 DSN: PA-2700

Dear Mr. Gold:

Enclosed is the trip report for the sampling event that was conducted at the Robert Wooler Company Site on 13 May 1998. As we discussed in our telephone conversation on this date, I recommend that no further actions be taken at this time due to the limited migration of the contaminants. There is also evidence of natural degradation of these contaminants which is further limiting any potential impact on the public health or the environment.

Please keep in mind that this document is considered confidential due to the listing of residential names in association with reported analytical values.

If you have any comments concerning this report, please contact me at (b) (6)

Very truly yours,

ROY F. WESTON, INC.

Not Responsive Based on Revised Scope

Site Leader

Attachment

cc: TDD File

D:trip report 2 cover ltr.doc

WESTON MANAGERS DESIGNERS/CONSULTANTS

PFE ORIGINAL (Red)

Trip Report

Robert Wooler Company Site
Dresher, Montgomery County, PA

CERCLIS No.	**PAD987279387**
DSN	**PA-2700**
DATE	**21 July 1998**

Prepared for

U.S. Environmental Protection Agency Region III

CEPP and Site Assessment Section

Philadelphia, PA

SATA
Site Assessment
Technical Assistance

TDD No. 9801-158
Contract No. 68-S5-3002

PFE PFE

Robert Wooler Company Site
Dresher, Montgomery County, Pennsylvania

TDD No. 9801-158
Contract No. 68-W5-3002

ORIGINAL (Red)

1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986, the U.S. Environmental Protection Agency (EPA) Region III Chemical Emergency Preparedness Program (CEPP) and Site Assessment Section, under the guidance of Site Assessment Manager Peter Gold, has directed the Roy F. Weston, Inc. (WESTON®), Site Assessment Technical Assistance (SATA) team to conduct a follow-up investigation at the Robert Wooler Company Site, Dresher, Montgomery County, Pennsylvania (CERCLIS No. PAD987279387). SATA conducted a sampling event at the site on Wednesday, 13 May 1998, to determine if hazardous substances have undergone horizontal migration.

2.0 BACKGROUND

2.1 Site Description

The Robert Wooler Company Site is located on 1755 Susquehanna Road, in Dresher, Montgomery County, Pennsylvania, in a light industrial/residential zone. Figure 1, Site Location Map, illustrates the site's location in the Dresher area. The climate of Montgomery County is temperate with mean temperatures ranging from 31.2 °F in January to 76.5 °F in July. The average annual precipitation is 41.42 inches and the mean lake evaporation is 34.5 inches with a 2-year, 24-hour rainfall event of 3.0 inches (DOC, 1996). This gives the Dresher area a net precipitation of 6.92 inches.

2.2 Regulatory History

The Robert Wooler Company (RWC) Site is an active commercial metal heat treatment facility which has been in operation since 1939. During a 1989 inspection involving the adjacent Selas Corporation, the well at the Wooler facility was sampled. The sample results showed elevated levels of trichloroethane, trichloroethene, tetrachloroethene and dichloroethane in the well water (the highest levels identified in that sampling event). The well is used to supply non-contact cooling water for the facility's heat treating equipment. A Preliminary Assessment (PA) was conducted at the Robert Wooler facility and the final report was completed in 1993 (E&E, 1993).

The PA stated that the facility used trichloroethene (TCE) as a cleaning agent from 1963 to 1985. It also suggests that the source of the hazardous substances may be a septic field once utilized by the facility. The septic field was active from 1939 until the early 1980's, when the facility was connected to the municipal system.

SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangles: Ambler, PA, 1966, photorevised 1983.

Date: 7/2/98

Figure 1
Site Location Map
Robert Wooler Company Site
Dresher Township
Montgomery County, PA

According to facility officials, the septic system was backfilled at that time. There have been no spill reports submitted by the Robert Wooler Company to federal or state agencies.

In addition, the PA states that the Wooler facility had discharged an algaecide (CGO-10-with Visigard), used to clean the cooling towers, to a storm sewer until January 1992. The Pennsylvania Department of Environmental Protection (PADEP) investigated a complaint of soil staining along the unnamed tributary and traced the problem back to the storm sewers being utilized by the facility.

The unnamed tributary, which is believed to be perennial, empties into Rapp Run, which feeds into the Sandy Run Creek. The Sandy Run Creek feeds into the Wissahickon Creek. In February 1992, a Notice of Violation was issued by PADEP to the facility, ordering that the discharge of the algaecide to the storm sewer be stopped immediately. Robert Wooler complied with the order and plugged the storm sewer connection. Currently, the algaecide is discharged to the municipal sewer under permit with the Upper Dublin Sewer Department and the Abington Wastewater Treatment Plant (E&E, 1993).

In 1997, SATA conducted a site inspection of the facility to determine if hazardous substances were present and what impact they may have on the public health and the environment. This inspection showed evidence of hazardous substances impacting the groundwater on the site. A PREscore, prepared in conjunction with the site inspection, indicated an observed release to groundwater targets due to the presence of hazardous substances in the Wooler well; however, no direct evidence of this was documented. It was hypothesized by SATA that the Wooler well was acting as a containing factor in minimizing the hazardous substance release (SATA, 1997).

3.0 SITE ACTIVITIES

3.1 Actions Taken

On 13 May 1998, SATA members Not Responsive Based on Revised Scope conducted a sampling event to further characterize the presence of hazardous substances in the groundwater surrounding the Robert Wooler Company site. SATA collected nine well samples within a one-mile radius of the Wooler facility. In addition to this, one duplicate sample was collected to meet field quality assurance measures.

3.2 Site Conditions

The Robert Wooler Company facility is located in a light industrial/residential area of Dresher, Montgomery County, Pennsylvania. Approximately 300 feet northwest of the facility is an unnamed tributary to Rapp Run, which flows from the northeast along the edge of state route 276. The wells sampled for this event surrounded the Wooler facility and were all within a one-mile radius of the site location. The

Manufacturers Country Club, the only public drinking water source sampled for this event, is located approximately 0.9 miles south-southwest of the site.

3.3 Meteorological Conditions

The ambient weather conditions for the greater Dresher area for the day of the sampling event are provided as below:

Table 1 Meteorological Conditions

Average Temperature	74°F
Primary Wind Direction	west
Wind Speed	approximately 1-5 mph
Sky Condition	partly cloudy

3.4 Sampling Activities

Samples were collected to identify the presence of and potential horizontal migration of hazardous substances from the site. The sampling event followed the procedures outlined in the site sampling plan with the following exceptions:

- Sample RWGW04 was not collected from the (b) (6) (b) (6) contacted SATA member Not Responsive Based on Revised Scc by telephone on 12 May 1998, to inform me that no one would be home on the thirteenth due to a personal emergency. No sample was collected from the (b) (6) home for this reason. This sample number was assigned to the (b) (6) home.

- The (b) (6) homes were not sampled, as SATA was unable to contact these residences prior to the sampling event.

- A duplicate sample was collected from the Manufacturers Country Club (MCC) well rather than the RWC well due to the location of the MCC well access. The RWC well access was in the locker room of the facility with no means of controlling spillage from the sample collection; therefore, a duplicate sample was collected at the MCC where the spillage was containable.

- SATA experienced a delay in obtaining a pH/conductivity meter for this event; therefore, each residential well was purged for 15 minutes to ensure samples were indicative of the aquifers involved. The RWC, MCC and Allied Concrete wells were purged for only five-minutes each due to the wells' high volume usage during working hours.

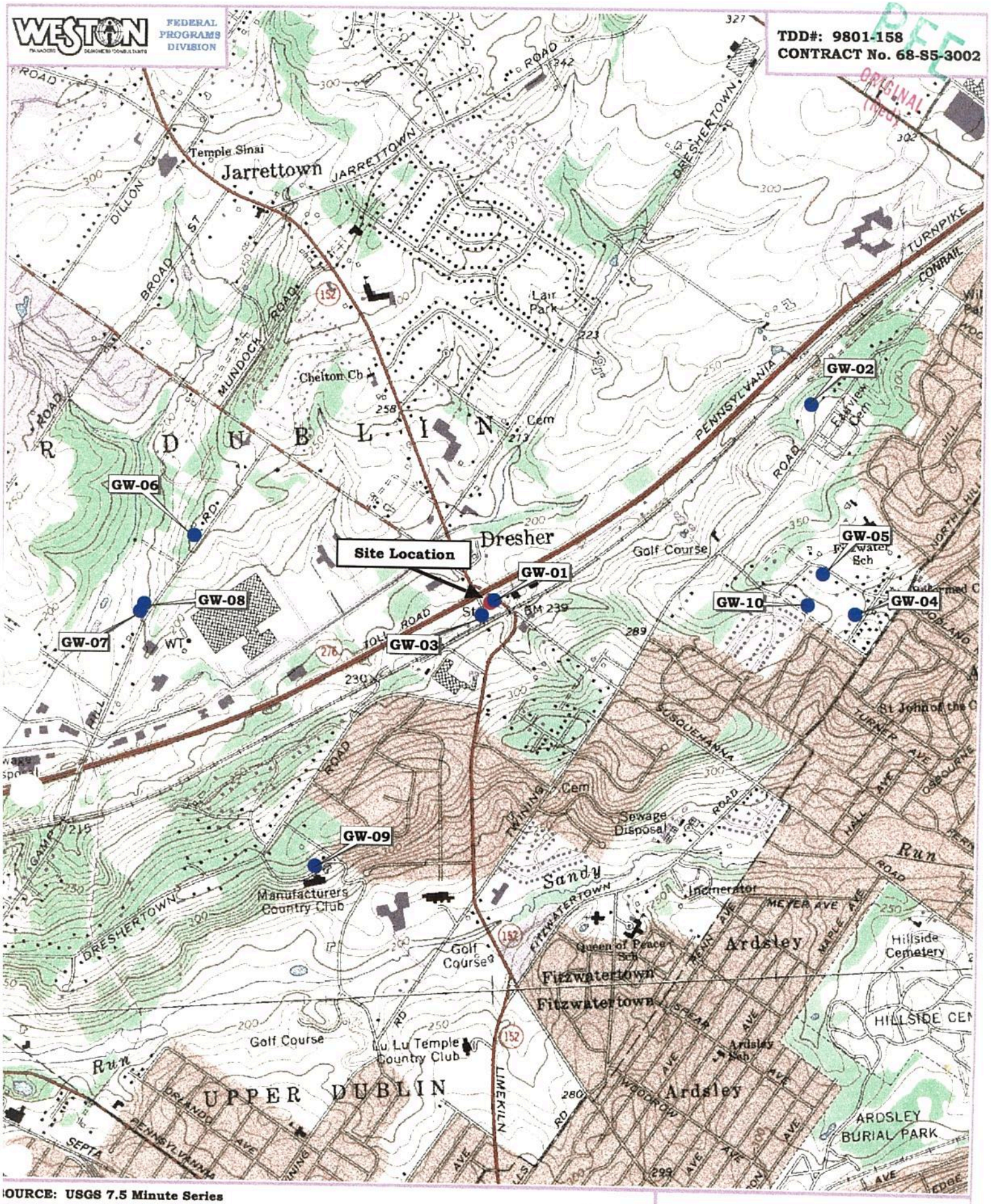
All the samples collected were analyzed for volatile organics according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLC02.1. Table 2, Sample Locations, shows the sample identification number, the resident's name and the address for each location. Figure 2, Sample Location Map, shows the sample locations in relation to the Wooler facility.

Table 2
Sample Locations

Sample #	Name	Location
RWGW-01	Phil Keydell	Robert Wooler Company P.O. Box 300 Dresher, PA 19025
RWGW-02	(b) (6)	(b) (9)
RWGW-03		
RWGW-04		
RWGW-05		
RWGW-06		
RWGW-07		
RWGW-08		
RWGW-09		
RWGW-10		
RWGW-11	Duplicate	Duplicate of Manufacturers C.C. Well
BL-01	Blank	

3.5 Sampling Results

The samples collected for this event were sent to the Recra Labnet-Pennsylvania (CLP approved) laboratory for analysis. Only samples RWGW01 and RWGW03 showed any contamination. Sample RWGW02 (b) (6) showed the presence of chloroform (2 ug/L); however, chloroform is a known laboratory contaminant which may have been introduced during the analysis. Table 3, Analytical Summary, indicates which samples showed contamination and at what levels contamination was present. According to the quality assurance package this contaminant was



SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangles: Ambler, PA, 1966, photorevised 1983.

Date: 7/13/98

Figure 2
Sample Location Map
Robert Wooler Company Site
Dresher Township
Montgomery County, PA

present, but the value is not accurate. See Attachment 1 for a copy of the raw analytical results.

Table 3
Analytical Summary

Compound Detected	RWGW01	RWGW02	RWGW03
1,1,1-Trichloroethane	3 (j)	ND	ND
Trichloroethene	21 (l)	ND	ND
Tetrachloroethene	4 (j)	ND	11 (l)
Chloroform	ND	2 (j)	ND

ND - Analyte was not detected.
j - Analyte present. Reported value may not be accurate.
l - Analyte present. Reported value is biased low.

4.0 FUTURE ACTIONS/RECOMMENDATIONS

The information provided above indicates that the hazardous substances present at the Robert Wooler facility are being reduced by the natural flushing of the affected aquifer. The reported levels for this sampling event are lower than the values reported in the March 1997 sampling event , which were lower than the levels reported in the 1993 sampling event. It is logical to infer that the groundwater contamination continues to be reduced by natural dilution over time. The analytical results for this event do not exceed current EPA Region III Risk Based Concentration (RBC) values (Smith, 1998). It can also be stated that the horizontal migration of these substances is probably being restricted by the high volume production wells in use at the Wooler and Allied facilities. Based upon this information, SATA recommends that no further actions be taken at this time.

5.0 REFERENCES

Department of Commerce. 1996. *Technical Paper No. 40, Rainfall Frequency Atlas of the United States*. Hydrologic Services Division, Washington D.C.

E&E. 1993. *Preliminary Assessment for the Robert Wooler Company Site, Dresher, Montgomery County, Pennsylvania.* Prepared by M. Aucion. Ecology and Environment, Inc., Philadelphia, Pennsylvania. February.

U.S. EPA Region III. 1998. *Risk-Based Concentration Table.* Prepared by R. L. Smith. 14 April.

[redacted] *Site Inspection Report Robert Wooler Company Site.* Roy F. Weston, Inc., Site Assessment Technical Assisstance Team, Delran, NJ. October

Attachment: Recra Labnet Analytical Report

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Attachment 1

Raw Analytical Results

United States Environmental Protection Agency
Region III
Office of Analytical Services and Quality Assurance
(410) 573-2600

839 Bestgate Road
Annapolis, MD 21401
FAX: (410) 573-2698
(410) 573-2702

201 Defense Hwy., Suite 200
Annapolis, MD 21401
FAX: (410) 573-2771
(410) 573-2772

PFE
ORIGINAL (Red)

DATE : June 15, 1998

SUBJECT: Region III Data QA Review

FROM : Fredrick Foreman
Region III ESAT RPO (3ES20)

TO : Pete Gold
Regional Project Manager (3HS33)

Attached is the organic data validation report for the Robert Wooler Company Site (Case #26191; SDG #CTE48) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me at (410) 573-2629.

Attachment

cc: Not Responsive Based on Revised Scope [redacted]

WA File: 0398202 TDF: 0601

Lockheed Martin Services Group
Environmental Services & Technologies Region 3
1419 Forest Drive, Suite 104 Annapolis, MD 21403
Telephone 410-268-7705 Facsimile 410-268-0331

PFE
ORIGINAL (Red)

LOCKHEED MARTIN

DATE: June 11, 1998

SUBJECT: Level C1 Organic Data Validation for Case 26191,
SDG: CTE48
Site: Robert Wooler Company

FROM: Not Responsive Based on Revised Scope
Organic Data Reviewer

Not Responsive Based on Revised Scope
Senior Oversight Chemist

TO: Not Responsive Based on Revised Scope
ESAT Regional Project Officer

THROUGH: Not Responsive Based on Revised Scope
ESAT Team Manager

OVERVIEW

Case 26191, Sample Delivery Group (SDG) CTE48, consisted of twelve (12) aqueous samples submitted to Recra/Labnet (RECMD), Monroeville, PA, for volatile analyses. The sample set included one (1) trip blank and one (1) field duplicate pair. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLM03.2 through Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to EPA Level C1 Innovative Approaches for Validation of Organic Data utilizing Computer Aided Data Review and Evaluation (CADRE) program, version 2.3.1. CADRE software utilizes electronic data submitted by the laboratory and evaluates the data according to Region III Modifications to the National Functional Guidelines. Quality Control (QC) measures evaluated by CADRE for this level of review are included in Appendix D. In addition, visual inspection of sample chromatograms and spectra was performed by the reviewer. All samples were successfully analyzed for all target compounds.

MINOR PROBLEM

- The interior cooler chest temperature of 9°C as arrived at the laboratory exceeded the required temperature of 4 °C as stated in the Statement of Work (SOW). Positive results not superseded by "B" or "J" were qualified "L". Quantitation limits were qualified "UL".

NOTES

- Bromomethane failed precision criteria [Percent Difference (%D)] in volatile continuing calibration performed 5/21/98. No positive results were reported for this compound in field samples. Percent Difference was less than fifty percent (%D < 50%); quantitation limits for bromomethane were not qualified.

- The maximum concentrations of all target compounds found in the analyses of trip and method blanks are listed below. Samples with concentrations of common laboratory contaminants less than ten times (< 10X) highest blank concentration or with concentrations of other contaminants less than five times (< 5X) blank concentration have been qualified "B".

Compound	Concentration (ug/L)
chloromethane	4 J
bromomethane	3 J
methylene chloride*	5 J
acetone*	18

* common laboratory contaminant

- Compounds detected below Contract Required Quantitation Limits (CRQLs) were qualified "J" unless superseded by "B"on the CADRE Qualified Spreadsheet Reports.

All data for Case 26191, SDG CTE48, were reviewed in accordance with the Innovative Approaches to Data Validation, Region III, June 1995, and Region III Modifications to the National Functional Guidelines for Organic Data Review, September 1994.

ATTACHMENTS

1) Appendix A Glossary of Data Qualifier Terms
2) Appendix B CADRE Qualified Spreadsheet Reports
3) Appendix C CADRE Validation Reports
4) Appendix D Support Documentation

DCN: 26191rpt

Appendix A

Glossary of Data Qualifier Terms

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(Red)

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

CADRE Qualified Spreadsheet Reports

PFE

ORIGINAL (RED)

TCL QUALIFIED SPREADSHEET

Case No: 26191
SDG No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

EPA SAMPLE NUMBER:	CTE58		CTE59					
REGIONAL SAMPLE NUMBER:	RWGW11		RWBL01					
SAMPLE LOCATION:	Duplicate (CTE56)		Trip Blank					
SAMPLE TYPE:	Water/Low		Water/Low					
MATRIX/ANALYSIS:	1.0		1.0					
DILUTION FACTOR:								
PERCENT MOISTURE:								
VOA								
Chloromethane	3	B	3	B				
Bromomethane	10	UL	10	UL				
Vinyl Chloride	10	UL	10	UL				
Chloroethane	10	UL	10	UL				
Methylene Chloride	5	B	5	J				
Acetone	10	UL	10	UL				
Carbon Disulfide	10	UL	10	UL				
1,1-Dichloroethene	10	UL	10	UL				
1,1-Dichloroethane	10	UL	10	UL				
1,2-Dichloroethene (total)	10	UL	10	UL				
Chloroform	3	J	10	UL				
1,2-Dichloroethane	10	UL	10	UL				
2-Butanone	10	UL	10	UL				
1,1,1-Trichloroethane	10	UL	10	UL				
Carbon Tetrachloride	10	UL	10	UL				
Bromodichloromethane	10	UL	10	UL				
1,2-Dichloropropane	10	UL	10	UL				
cis-1,3-Dichloropropene	10	UL	10	UL				
Trichloroethene	10	UL	10	UL				
Dibromochloromethane	10	UL	10	UL				
1,1,2-Trichloroethane	10	UL	10	UL				
Benzene	10	UL	10	UL				
trans-1,3-Dichloropropene	10	UL	10	UL				
Bromoform	10	UL	10	UL				
4-Methyl-2-Pentanone	10	UL	10	UL				
2-Hexanone	10	UL	10	UL				
Tetrachloroethene	10	UL	10	UL				
1,1,2,2-Tetrachloroethane	10	UL	10	UL				
Toluene	10	UL	10	UL				
Chlorobenzene	10	UL	10	UL				
Ethylbenzene	10	UL	10	UL				
Styrene	10	UL	10	UL				
Xylene (total)	10	UL	10	UL				

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Case No: 26191
SDG No: CTE48

TCL QUALIFIED SPREADSHEET

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

RFE
ORIGINAL (Red)

EPA SAMPLE NUMBER:	CTE53		CTE54		CTE55		CTE56		CTE57	
REGIONAL SAMPLE NUMBER:										
LOCATION:	RWGW06		RWGW07		RWGW08		RWGW09		RWGW10	
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Duplicate (CTE58)		Routine Sample	
MATRIX/ANALYSIS:	Water/Low		Water/Low		Water/Low		Water/Low		Water/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:										
VOA										
Chloromethane	4	B	3	B	3	B	2	B	3	B
Bromomethane	10	UL	10	UL	10	UL	10	UL	10	UL
Vinyl Chloride	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Methylene Chloride	4	B	5	B	5	B	4	B	5	B
Acetone	10	UL	10	UL	10	UL	10	UL	10	UL
Carbon Disulfide	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Dichloroethene (total)	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroform	10	UL	10	UL	10	UL	2	J	10	UL
1,2-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
2-Butanone	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,1-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Carbon Tetrachloride	10	UL	10	UL	10	UL	10	UL	10	UL
Bromodichloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Dichloropropane	10	UL	10	UL	10	UL	10	UL	10	UL
cis-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Trichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
Dibromochloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,2-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Benzene	10	UL	10	UL	10	UL	10	UL	10	UL
trans-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Bromoform	10	UL	10	UL	10	UL	10	UL	10	UL
4-Methyl-2-Pentanone	10	UL	10	UL	10	UL	10	UL	10	UL
2-Hexanone	10	UL	10	UL	10	UL	10	UL	10	UL
Tetrachloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,2,2-Tetrachloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Toluene	10	UL	10	UL	10	UL	10	UL	10	UL
Chlorobenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Ethylbenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Styrene	10	UL	10	UL	10	UL	10	UL	10	UL
Xylene (total)	10	UL	10	UL	10	UL	10	UL	10	UL

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

PEE

Case No: 26191
SDG No: CTE48

TCL QUALIFIED SPREADSHEET

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

EPA SAMPLE NUMBER:	CTE48		CTE49		CTE50		CTE51		CTE52	
REGIONAL SAMPLE NUMBER:	RWGW01		RWGW02		RWGW03		RWGW04		RWGW05	
SAMPLE LOCATION:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
SAMPLE TYPE:	Water/Low		Water/Low		Water/Low		Water/Low		Water/Low	
MATRIX/ANALYSIS:										
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:										
VOA										
Chloromethane	10	UL	3	B	4	B	3	B	3	B
Bromomethane	10	UL	10	UL	10	UL	10	UL	10	UL
Vinyl Chloride	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Methylene Chloride	4	B	5	B	4	B	4	B	5	B
Acetone	10	UL	10	UL	10	UL	10	UL	10	UL
Carbon Disulfide	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Dichloroethene (total)	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroform	10	UL	2	J	10	UL	10	UL	10	UL
1,2-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
2-Butanone	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,1-Trichloroethane	3	J	10	UL	10	UL	10	UL	10	UL
Carbon Tetrachloride	10	UL	10	UL	10	UL	10	UL	10	UL
Bromodichloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Dichloropropane	10	UL	10	UL	10	UL	10	UL	10	UL
cis-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Trichloroethene	21	L	10	UL	10	UL	10	UL	10	UL
Dibromochloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,2-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Benzene	10	UL	10	UL	10	UL	10	UL	10	UL
trans-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Bromoform	10	UL	10	UL	10	UL	10	UL	10	UL
4-Methyl-2-Pentanone	10	UL	10	UL	10	UL	10	UL	10	UL
2-Hexanone	10	UL	10	UL	11	L	10	UL	10	UL
Tetrachloroethene	4	J	10	UL	10	UL	10	UL	10	UL
1,1,2,2-Tetrachloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Toluene	10	UL	10	UL	10	UL	10	UL	10	UL
Chlorobenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Ethylbenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Styrene	10	UL	10	UL	10	UL	10	UL	10	UL
Xylene (total)	10	UL	10	UL	10	UL	10	UL	10	UL

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:07 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

Appendix C

CADRE Validation Reports

PEE

ORIGINAL (RED)

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:06

CRITERIA FILE: REG3O91

DATA

	Original	X	Qualified

QUALIFICATIONS PERFORMED

X	Quantitation Limit		CRDL Standards
	Percent Moisture		ICS
X	Holding Time		LCS
X	Calibrations		Duplicates
X	Matrix Spikes		Furnace AA QC
X	IPC		ICP Serial Dilutions
X	Internal Standards		Sample Results Verification
X	SMC/Surrogates		Laboratory Blanks
	System Performance	X	Field QC
	Sample Cleanup		

PRINT NON-DETECTS

X	Yes		No

PRINT REJECTED RESULTS

X	Yes		No

PFE
ORIGINAL (Red)

Quantitation Limit Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

CONTRACT REQUIRED SAMPLE QUANTITY

	Water	Low Soil	Med Soil
VOA	5.0 (ML)	5.0 (G	4.0 (G)

DC-45: The following volatile samples have analyte concentrations below the quantitation limit (CRQL . All results below the CRQL are qualified "J".

CTE48
Methylene Chloride, 1,1,1-Trichlorcethane, Tetrachloroethene

CTE49
Chloromethane, Methylene Chloride, Chloroform

CTE50
Chloromethane, Methylene Chloride

CTE50MS
Chloromethane, Methylene Chloride

CTE50MSD
Chloromethane, Methylene Chloride

CTE51
Chloromethane, Methylene Chloride

CTE52
Chloromethane, Methylene Chloride

CTE53
Chloromethane, Methylene Chloride

CTE54
Chloromethane, Methylene Chloride

CTE55
Chloromethane, Methylene Chloride

CTE56
Chloromethane, Methylene Chloride, Chloroform

CTE57
Chloromethane, Methylene Chloride

CTE58
Chloromethane, Methylene Chloride, Chloroform

CTE59
Chloromethane, Methylene Chloride

VBLK21
Chloromethane, Bromomethane, Methylene Chloride

VHBLK14
Chloromethane, Methylene Chloride

PFE

ORIGINAL (Red)

Holding Time Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

HOLDING TIME CRITERIA

Volatile

Preserved	Primary	Expanded
Water	14	28
Soil	14	28

	---- Aromatic ----		-- Non-aromatic --	
Unpreserved	Primary	Expanded	Primary	Expanded
Water	7	14	14	28
Soil	14	28	14	28

No problems found for this qualification.

PFE

ORIGINAL (Red)

Calibration Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

CALIBRATION CRITERIA

Volatile

	Primary	Expanded
Minimum RRF	0.05	0.05
Maximum %RSD (initial calibration)	30	50
Maximum %D (continuing calibration)	25	50
Calibration time period	12	

DC-23: The following volatile samples are associated with a continuing calibration percent difference (%D) outside criteria.
Hits are qualified "J".

Bromomethane
CTE48, CTE49, CTE50, CTE50MS, CTE50MSD, CTE51
CTE52, CTE53, CTE54, CTE55, CTE56, CTE57
CTE58, CTE59, VBLK21, VHBLK14

Matrix Spike Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

MATRIX SPIKE CRITERIA

Volatile

Percent Recovery Limits & RPD

	Water			Soil		
	Lower	Upper	RPD	Lower	Upper	RPD
1,1-Dichloroethene	61.0	145.0	14.0	59.0	172.0	22.0
Trichloroethene	71.0	120.0	14.0	62.0	137.0	24.0
Benzene	76.0	127.0	11.0	66.0	142.0	21.0
Toluene	76.0	125.0	13.0	59.0	139.0	21.0
Chlorobenzene	75.0	130.0	13.0	60.0	133.0	21.0

No problems found for this qualification.

PFE

ORIGINAL (Red)

Instrument Performance Check Report

SDG No.: CTE48
CASE No.: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.CAS

The complete primary criteria for BFB are as follows.

Bromofluorobenzene (BFB)

m/z	ION ABUNDANCE CRITERIA (Volatile)
50	8.0 - 40.0% of m/z 95
75	30.0 - 66.0% of m/z 95
95	base peak, 100.0% relative abundance
96	5.0 - 9.0% of m/z 95
173	less than 2.0% of m/z 174
174	50.0 - 120.0% of m/z 95
175	4.0 - 9.0% of m/z 174
176	93.0 - 101.0% of m/z 174
177	5.0 - 9.0% of m/z 176

No problems found for this qualification.

PFE
ORIGINAL (Red)

Internal Standards Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

INTERNAL STANDARD CRITERIA

Volatile

Retention Time & Area Count Limits

	-- Primary --		- Expanded --	
	Lower	Upper	Lower	Upper
Retention time	- 0.5	+ 0.5	- 0.5	+ 0.5
Area count	/ 2	* 2	/ 5	* 2

No problems found for this qualification.

PFE

ORIGINAL (RED)

SMC/Surrogate Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

SMC/SURROGATE CRITERIA

Volatile

Percent Recovery Limits

	--- Water ---		---- Soil ---	
	Lower	Upper	Lower	Upper
Toluene-d8	88.0	110.0	84.0	138.0
Bromofluorobenzene	86.0	115.0	59.0	113.0
1,2-Dichloroethane-d4	76.0	114.0	70.0	121.0

No problems found for this qualification.

PFE ORIGINAL (Red)

Field QC Report

SDG NO: CTE48
CASE NO: 26191

LABORATORY: RECRA ENVIRON
AGENCY INPUT FILE: CTE48.OAS

DC-136: The following volatile samples are affected by contamination in their corresponding trip blank for the indicated analytes. Hits are qualified "B" and non-detects are not qualified.

Methylene Chloride

CTE48, CTE49, CTE50, CTE50MS, CTE50MSD, CTE51
CTE52, CTE53, CTE54, CTE55, CTE56, CTE57
CTE58

DC-367: The following volatile samples are affected by contamination in an associated method blank for the indicated analytes. Hits are qualified "B" and non-detects are not flagged.

Chloromethane

CTE49, CTE50, CTE50MS, CTE50MSD, CTE51, CTE52
CTE53, CTE54, CTE55, CTE56, CTE57, CTE58
CTE59

Appendix D

Support Documentation

PFE
ORIGINAL (Red)

Computer-Aided Data Review and Evaluation (CADRE)

Level C1 - Organic

DATA ASSESSMENT	CADRE	REVIEWER
Action Level Notification		X
Instrument Tune (volatile and semivolatile only)	X	
GC/ECD Performance Check (pesticide only)	X	
Initial Calibration (RRF/CF)	X	
Initial Calibration (%RSD)	X	
Continuing Calibration (RRF) (volatile and semivolatile only)	X	
Continuing Calibration (%D)	X	
Laboratory Blank	X	
MS/MSD (%R, RPD)	X	
Internal Standard Area (volatile and semivolatile only)	X	
Field Blank	X	
Holding Time	X	
Retention Time	X	
Surrogate Recovery	X	
Dilution Factor		X
Pesticide Cleanup Checks (pesticide only)	X	
Mass Spectra (volatile and semivolatile only)		X
Chromatograms		X
Sample Paperwork		X
Raw Data		
Field Duplicate Comparison		
MS/MSD Comparison		
TIC Evaluation (volatile and semivolatile only)		

EPA — Organic Traffic Report & Chain of Custody Record

United States Environmental Protection Agency
Contract Laboratory Program

(For Organic CLP Analysis)

SAS No. (if applicable):

Case No.: 26191

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H2SO4
   5. Ice only
   6. Other (Specify in Column D)
   N. Not preserved

2. Region No.: 3 | Sampling Co.: Weston | 4. Date Shipped: 5/13/98 | Carrier: Fed Ex

[redacted] (Not Responsive Based on Revised Scope)

Airbill Number: 366977494 4

6. Date Received -- Received by: [redacted] (Not Responsive Based on Revised Scope) 5/14/98

Laboratory Contract Number: 68-D5-0010 | Unit Price: 85.00

7. Transfer to: | Date Received:

Received by:

Contract Number: | Price:

3. Purpose*
   Lead: [X] SF [ ] PRP [ ] ST [ ] FED
   Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
   Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

5. Ship To: RECRA LabNet - Penn
3200 Tech Center Drive
Monroeville, PA 15146

ATTN: [redacted] (Not Responsive Based on Revised Scope)

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) / Other	E RAS Analysis: VOA	BNA	Pest/ PCB	High only: ARO/ TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
CTE48	Z	L M	G	1	X				3-219503 4-036	RWGW01	5/13/98 0925	—	DP			
CTE49	Z	L	G	1	X				3-219503 7-039	RWGW02	5/13/98 1235	—	AT			
CTE50	Z	L	G	1	X				3-219504 0-042	RWGW03	5/13/98 0945	—	AT			
CTE51	Z	L	G	1	X				3-219504 3-045	RWGW04	5/13/98 1400	—	AT			
CTE52	Z	L	G	1	X				3-219504 6-048	RWGW05	5/13/98 1450	—	AT			
CTE53	Z	L	G	1	X				3-219504 9-051	RWGW06	5/13/98 1115	—	PJ			
CTE54	Z	L	G	1	X				3-219505 2-054	RWGW07	5/13/98 1015	—	AT			
CTE55	Z	L	G	1	X				3-219505 5-057	RWGW08	5/13/98 1037	—	AT			
CTE56	Z	L	G	1	X				3-219505 8-060	RWGW09	5/13/98 1115	—	AT			
CTE57	Z	L	G	1	X				3-219506 1-063	RWGW10	5/13/98 1410	—	AT			

Shipment for Case Complete? (Y/N):

Page 1 of 2

Sample(s) to be Used for Laboratory QC: CTE55

Additional Sampler Signatures:

Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[redacted] (Not Responsive Based on Revised Scope)	5/13/98 1600				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		[redacted] (Not Responsive Based on Revised Scope)			
Relinquished by: (Signature)	Date / Time			Date / Time	Remarks: Is custody seal intact? Y/N/none
				5/14/98 0910	9°C

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO C; Yellow - Lab for Return to SMC

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIC

A21-012-4 REV. 3/93

800000

EPA — Organic Traffic Report & Chain of Custody Record

United States Environmental Protection Agency
Contract Laboratory Program

(For Organic CLP Analysis)

SAS No. (If applicable):

Case No.: 26191

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H2SO4
   5. Ice only
   6. Other (Specify in Column D)
   N. Not preserved

2. Region No.: 3
Sampling Co.: Weston
[redacted]

4. Date Shipped: 5/13/98
Carrier: Fed Ex
Airbill Number: 366 9774 944

[redacted]

Laboratory Contract Number: 68-D5-0010
Unit Price: 851.00

5. Ship To: Recra-Labnet - Pennsylvania
3000 Tech Center Drive
Monroeville PA 15146
ATTN: [redacted]

7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

Purpose: Lead [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E RAS Analysis: VOA	BNA	Pest/ PCB	High only ARO/ TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
CTE58	3	LM	G	1	X				3-21951164-066	RUIGW11	5/13/98/1220	—	R			
CTE59	4	L	G	1	X				3-21951167-069	RUIBL01	5/13/98/0900	—	R			
									Trip Blank							

Shipment for Case Complete? (Y/N):
Page: 2 of 2
Sample(s) to be Used for Laboratory QC: CTE55
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 10

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[redacted]	5/13/1220				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		[redacted]			
Relinquished by: (Signature)	Date / Time		Date / Time	Remarks: Is custody seal intact? Y/N/none	
			5/14/98 0900	Temp 9°C	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - [illegible] Copy; Yellow - Lab Copy for Return to SMO

EPA Form 6 [illegible]

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

A21-0124 REV. 3/93

060009

PAGE_1_OF_1_ EPA SAMPLE SHIPPING LOG

(1) (REQUIRED FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM)

PROJECT SITE NAME:__Robert Wooler____; EPA PROJECT OFFICER:__Pete Gold____

RAS NO._26191__; DAS NO._____; TASK OR SET NO._____1_____

PROJECT SITE LEADER:__[redacted]___; PHONE NO[redacted]

PROJECT SAMPLE COORDINATOR:_[redacted]_____; PHONE NO[redacted]

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ sol)	TYPE OR REQUES org, dio inor, SAS	SAMPLE TRAFFIC REPORT NUMBER	ORGANICS OR INORGANICS LAB NAME	DATE SHIPPED	DATA RECEIVED (XX OUT ITEMS NOT REQUESTED) VOA	BNA	PES	TCDD		METALS	CN
(2)	(3)	(4)	(5)	(6)	(7)	(8)	<-----(9)----->						
	LOW	AQ	ORG	CTE48	RECMD	05//13/98	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE49	RECMD	05//13/99	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE50	RECMD	05//13/100	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE51	RECMD	05//13/101	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE52	RECMD	05//13/102	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE53	RECMD	05//13/103	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE54	RECMD	05//13/104	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE55	RECMD	05//13/105	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE56	RECMD	05//13/106	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE57	RECMD	05//13/107	✓	XX	XX	XX	XX	XX	XX
Dup CTE56	LOW	AQ	ORG	CTE58	RECMD	05//13/108	✓	XX	XX	XX	XX	XX	XX
Trip Blank	LOW	AQ	ORG	CTE59	RECMD	05//13/109	✓	XX	XX	XX	XX	XX	XX
							received by KD					5-28-98	
												CTE 48	

MAY 1998 RECEIVED

FINAL SAMPLING: YES____X_____; NO_____; FINAL SHIPPING DATE:_05/13/98_____

(14)

SAS REQUEST:(DETALIS REQUIRED)			
LAB NAME	SAS REQUEST (itemize)	DATE SHIPPED	DATA REC'D
(11)	(12)	(13)	

PFE
ORIGINAL
(Red)

ANALYTICAL RESULTS
Case Narrative Notes
Prepared For

The United States Environmental Protection Agency

Prepared By

Recra LabNet Contract # 68D50010
3000 Tech Center Road
Monroeville, PA 15146

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical result is indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference.

* U.S. Environmental Protection Agency 8/94 Organic Statement of Work, OLMO3.2.

COMMENTS

Comments pertain to data on all pages of this report.

It is RECRA Environmental's policy to report positive identifications to a level of approximately ten percent of CRQL.

The Volatile sample pH data has been reported in tabular format and is located directly behind the GC Column Summary portion of the Case Narrative.

The protocol required Alkane summaries are reported in tabular format, listed by retention time in minutes, and are located directly behind the Volatile sample pH data, directly preceding the Fraction Notes portion of the Case Narrative.

GCMS quantitation reports for both samples and standards contained within this sample data package often require manual integration of the areas of the quantitation ion for select constituents. When such manual integration is required, the quantitation report for said constituents are flagged with an "M". The need for manual integration includes, but is not necessarily limited to, the autoquantitation program's failure to integrate peaks of interest or the failure to correctly integrate said peaks due to poor geometry, peak tailing or peak resolution. Manual edits of Form 1 data, if performed, are flagged with an "X" qualifier.

PFE

ORIGINAL (Red)

GAS CHROMATOGRAPH COLUMNS

VOLATILES

GC Column: J&W Scientific DB-624
Internal Diameter: 0.53 mm
Length: 75m
Coating: Cyanopropylphenyl Methyl Silicone
Film Thinckness: 3.0 um

GC Column: Restek RTX-502.2
Internal Diameter: 0.32 mm
Length: 60m
Coating: Phenylmethyl Polysiloxane
Film Thickness: 1.8 um

Purge Trap: Supelco: Vocarb 3000
Packing Material: 10cm Carbopack B
6cmm Caboxen 1000
1cm Carboxen 1001

SEMIVOLATILES

GC Column: J&W Scientific DB5
Internal Diameter: 0.25 mm
Length: 30m
Coating: 5% Diphenyl-95% Dimethylpolysiloxane
Film Thickness: 1.0 um

PESITCIDES/PCB's

GC Column: J&W Scientific DB608
Internal Diameter: 0.53 mm
Length: 30m
Coating: Cyanopropylphenyl Methyl Silicone
Film Thickness: 0.83 um

GC Column: J&W Scientific DB1701
Internal Diameter: 0.53 mm
Length: 30m
Coating: 14% Cyanopropylphenyl Methylpolysiloxane
Film Thickness: 1.0 um

GC Column: J&W Scientific DB5
Internal Diameter: 0.53 mm
Length: 30m

GC Columns

Coating: 5% Phenyl-95% Methyl Silicone
Film Thickness: 1.5 um

GC Column: Restek RTX-5
Internal Diameter: 0.53 mm
Length: 30m
Coating: 5% Diphenyl-95% Dimethylpolysiloxane
Film Thickness: 1.5 um

PFE
ORIGINAL
(Red)

PFE

ORIGINAL (Red)

CASE/SDG: 26191/CTE48

CONTRACT NUMBER: 68-D5-0010

SAMPLE INFORMATION: CTE48
CTE49
CTE50
CTE51
CTE52
CTE53
CTE54
CTE55
CTE55MS
CTE55MSD
CTE56
CTE57
CTE58
CTE59

Recra LabNet of Monroeville, Pennsylvania received the above referenced samples from the USEPA on May 14, 1998. The delivery group contains 12 waters for Organic analyses. These analyses were performed according to instructions in the IFB document for this contract.

The samples in this case arrived with several vials broken. CTE51 had one vial broken and CTE58 had two vials broken. There was a sample tag for the trip blank but it was not present on the Traffic report. The coolers arrived with temperatures of 9 degrees Celsius.

(D.V.) ?

The date shipped was not on the chain of custody. There was no Airbill present in the shipment only the airbill sticker. The sample coordinator was notified of these discrepancies and the Laboratory was told to note them in the case narrative.

VOLATILE DATA:

There were no deviations from protocol observed during these analyses.

I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions listed above. Release of the data contained in this hardcopy data package and the computer-readable data submitted on diskette has been authorized by the Laboratory Manager, or his designee, as verified by the following signature.

Not Responsive Based on Revised Scope

5-22-98
Date

PFE
ORIGINAL (Red)

Sample Listing

CASE NO: 26191
SDG NO: CTE48

LABORATORY: RECRA ENVIRON

		VOA						
						ANALYSIS		
EPA SAMPLE NUMBER	REGIONAL SAMPLE NUMBER	MATRIX	LEVEL	SAMPLING DATE	DATE RECEIVED	DATE	TIME	INSTRUMENT
VBLK21		Water	Low	/ /	/ /	05/21/98	16:57	HPMS-5
CTE48		Water	Low	05/13/98	05/14/98	05/21/98	17:33	HPMS-5
CTE49		Water	Low	05/13/98	05/14/98	05/21/98	18:16	HPMS-5
CTE50		Water	Low	05/13/98	05/14/98	05/21/98	18:58	HPMS-5
CTE51		Water	Low	05/13/98	05/14/98	05/21/98	19:41	HPMS-5
CTE52		Water	Low	05/13/98	05/14/98	05/21/98	19:42	HPMS-5
CTE53		Water	Low	05/13/98	05/14/98	05/21/98	20:13	HPMS-5
CTE54		Water	Low	05/13/98	05/14/98	05/21/98	20:45	HPMS-5
CTE55		Water	Low	05/13/98	05/14/98	05/21/98	21:16	HPMS-5
CTE56		Water	Low	05/13/98	05/14/98	05/21/98	21:48	HPMS-5
CTE57		Water	Low	05/13/98	05/14/98	05/21/98	22:20	HPMS-5
CTE58		Water	Low	05/13/98	05/14/98	05/21/98	22:52	HPMS-5
CTE59		Water	Low	05/13/98	05/14/98	05/21/98	23:23	HPMS-5
CTE50MS		Water	Low	05/13/98	05/14/98	05/21/98	23:55	HPMS-5
CTE50MSD		Water	Low	05/13/98	05/14/98	05/22/98	00:26	HPMS-5
VHBLK14		Water	Low	/ /	/ /	05/22/98	00:58	HPMS-5

PFE

ORIGINAL (Red) (Blue)

Calibration Listing

CASE NO: 26191
SDG NO: CTE48

LABORATORY: RECRA ENVIRON

FRACTION	INSTRUMENT	TYPE	LAB FILE ID/ GC COLUMN	DATE	TIME	COMPOUND	RRF	%RSD (%D/RPD)
VOA	HPMS-5	INITIAL	E0508001	05/08/98	12:06			
VOA	HPMS-5	CONTINUING	E0521008	05/21/98	16:15			
						Bromomethane		29.7
Assoc. Sample(s.):		VBLK21		05/21/98	16:57			
		CTE48		05/21/98	17:35			
		CTE49		05/21/98	18:06			
		CTE50		05/21/98	18:38			
		CTE51		05/21/98	19:10			
		CTE52		05/21/98	19:42			
		CTE53		05/21/98	20:13			
		CTE54		05/21/98	20:45			
		CTE55		05/21/98	21:16			
		CTE56		05/21/98	21:48			
		CTE57		05/21/98	22:20			
		CTE58		05/21/98	22:52			
		CTE59		05/21/98	23:23			
		CTE50MS		05/21/98	23:55			
		CTE50MSD		05/22/98	00:26			
		VHBLK14		05/22/98	00:58			

FILE NAME: CTE48.SDG DATE: 06/02/98 TIME: 15:04 CADRE 2.3.1

• Only RRF and %RSD (%D/RPD) values which exceed criteria are listed.

PFE
ORIGINAL (Red)

TCL QUALIFIED SPREADSHEET

Case No: 26191
SDG No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

EPA SAMPLE NUMBER:	CTE50MS		CTE50MSD					
REGIONAL SAMPLE NUMBER:								
SAMPLE LOCATION:								
SAMPLE TYPE:	Matrix Spike		Matrix Spike Dup					
MATRIX/ANALYSIS:	Water/Low		Water/Low					
DILUTION FACTOR:	1.0/ 1.0		1.0/ 1.0					
PERCENT MOISTURE:								
VOA								
Chloromethane	4	B	3	B				
Bromomethane	10	U	10	U				
Vinyl Chloride	10	U	10	U				
Chloroethane	10	U	10	U				
Methylene Chloride	5	B	5	B				
Acetone	10	U	10	U				
Carbon Disulfide	10	U	10	U				
1,1-Dichloroethene	55		56					
1,1-Dichloroethane	10	U	10	U				
1,2-Dichloroethene (total)	10	U	10	U				
Chloroform	10	U	10	U				
1,2-Dichloroethane	10	U	10	U				
2-Butanone	10	U	10	U				
1,1,1-Trichloroethane	10	U	10	U				
Carbon Tetrachloride	10	U	10	U				
Bromodichloromethane	10	U	10	U				
1,2-Dichloropropane	10	U	10	U				
cis-1,3-Dichloropropene	10	U	10	U				
Trichloroethene	52		51					
Dibromochloromethane	10	U	10	U				
1,1,2-Trichloroethane	10	U	10	U				
Benzene	56		57					
trans-1,3-Dichloropropene	10	U	10	U				
Bromoform	10	U	10	U				
4-Methyl-2-Pentanone	10	U	10	U				
2-Hexanone	10	U	10	U				
Tetrachloroethene	10	U	10	U				
1,1,2,2-Tetrachloroethane	10	U	10	U				
Toluene	53		57					
Chlorobenzene	51		54					
Ethylbenzene	10	U	10	U				
Styrene	10	U	10	U				
Xylene (total)	10	U	10	U				

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:05 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

PFE ORIGINAL (RED)

TCL QUALIFIED SPREADSHEET

Case No: 26191
SDG No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

EPA SAMPLE NUMBER:	VBLK21		VHBLK14				
REGIONAL SAMPLE NUMBER:							
SAMPLE LOCATION:							
SAMPLE TYPE:	Method Blank		Storage Blank				
MATRIX/ANALYSIS:	Water/Low		Water/Low				
DILUTION FACTOR:	1.0/ 1.0		1.0/ 1.0				
PERCENT MOISTURE:							
VOA							
Chloromethane	4	J	4	J			
Bromomethane	3	J	10	U			
Vinyl Chloride	10	U	10	U			
Chloroethane	10	U	10	U			
Methylene Chloride	3	J	4	J			
Acetone	10	U	18				
Carbon Disulfide	10	U	10	U			
1,1-Dichloroethene	10	U	10	U			
1,1-Dichloroethane	10	U	10	U			
1,2-Dichloroethene (total)	10	U	10	U			
Chloroform	10	U	10	U			
1,2-Dichloroethane	10	U	10	U			
2-Butanone	10	U	10	U			
1,1,1-Trichloroethane	10	U	10	U			
Carbon Tetrachloride	10	U	10	U			
Bromodichloromethane	10	U	10	U			
1,2-Dichloropropane	10	U	10	U			
cis-1,3-Dichloropropene	10	U	10	U			
Trichloroethene	10	U	10	U			
Dibromochloromethane	10	U	10	U			
1,1,2-Trichloroethane	10	U	10	U			
Benzene	10	U	10	U			
trans-1,3-Dichloropropene	10	U	10	U			
Bromoform	10	U	10	U			
4-Methyl-2-Pentanone	10	U	10	U			
2-Hexanone	10	U	10	U			
Tetrachloroethene	10	U	10	U			
1,1,2,2-Tetrachloroethane	10	U	10	U			
Toluene	10	U	10	U			
Chlorobenzene	10	U	10	U			
Ethylbenzene	10	U	10	U			
Styrene	10	U	10	U			
Xylene (total)	10	U	10	U			

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:06 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.